REMARKS

Claims 1-46 are pending in the application. Claims 22-25 and 35-40 have been withdrawn from consideration. Please amend Claim 15. Applicants respectfully request entry of the foregoing amendment to Claim 15 prior to further examination. No new matter has been introduced.

Allowable Subject Matter

The Applicants thank the Examiner for the indication of allowable subject matter. Namely, Claims 3, 4, 7, 8, 12-16, 18, 21, 29-31, and 34 would be allowable if rewritten in independent form to include the limitations of there base claim and any intervening claims. For the reasons stated below, the base claims are considered allowable and their dependent claims are also allowable.

Regarding Section 102 Rejections

Claims 1, 2, 4-6, 17, 26-28, 32, 33, and 46 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Wiggerman et al. (U.S. Patent No. 5,544,076; hereinafter "Wiggerman"). The rejection is respectfully traversed.

The present invention provides a speed sensor for a marine vessel that corrects sensor non-linearities in the sensor's pulse rate so that the sensor produces an output with a pulse stream having a constant pulse rate while also reducing pulse-to-pulse variations of the pulse stream.

Wiggerman describes a marine speedometer system that utilizes a pressure sensing transducer that produces an electric signal in response to pressure in a conduit 36 of the sensing device. The electric signal is received by a control circuit which determines a speed of the vessel based on a look-up table of speed values associated with the electric signal. The speed of the vessel is then displayed on a non-linear analog display. The control circuit can receive manual calibrate up and calibrate down signals from a user based on actual time measurements. The pressure sensing transducer of Wiggerman does not have a known pulse rate because it does not operate in a pulsed fashion. Rather, the pressure sensing transducer provides a linear electric signal. Thus, since the pressure transducer of Wiggerman does not have a known pulse rate, it cannot and does not correct for non-linearities in the pulse rate nor reduce pulse to pulse variations of the pulse stream.

Wiggerman does not teach, suggest, or otherwise make obvious "substantially correcting non-linearities in the pulse rate so that the sensor produces a pulse stream output having a substantially constant pulse rate per unit of speed; and reducing pulse-to-pulse variations of the pulse stream" as claimed in Claim 1 because the pressure transducer of Wiggerman does not produce a pulse stream. As such, Wiggerman is not concerned with correcting non-linearities in the pulse stream or reducing the pulse-to-pulse variations thereof. Independent Claims 17, 26, and 46 include similar limitations and are allowable for the same reasons. Applicants respectfully request the withdrawal of the rejection of Claims 1, 17, 26, and 46 under 35 U.S.C. 102.

Claims 2, 4-6, 27-28, 32, and 33 depend from allowable base claims and are allowable for the same reasons. Applicant respectfully requests the withdrawal of the rejection of Claims 2, 4-6, 27-28, 32, and 33 under 35 U.S.C. 102.

Claims 41-45 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Amyot. (U.S. Patent No. 5,369,360). The rejection is respectfully traversed.

Amyot describes a recessed paddlewheel speed measuring device for personal watercraft. The paddle wheel, upon rotation, produces changes in electro-magnetic signal proportional to the marine vessel's speed. A "hall-effect" device is installed in an L-shaped compartment adjacent the paddle wheel and converts the changes in magnetic field from the paddle wheel to an electrical (output) signal. A wire from the "hall-effect" device or speed sensor, is directed through the rear of the transom of the watercraft to a speedometer mounted for driver's visibility. Amyot does not have a microprocessor for receiving the output signal from the Hall-effect device and generating a series of smoothed pulses nor does it have a driver circuit for receiving the series of smoothed pulses and creating a corrected pulsed signal.

Amyot does not teach, suggest, or otherwise make obvious "a microprocessor for receiving the output signal and generating a series of smoothed pulses; and a driver circuit for receiving the series of smoothed pulses and creating a corrected pulsed signal" as claimed in Claim 41 because Amyot does not have a microprocessor or a driver circuit for creating a corrected pulsed signal. Applicants respectfully request the withdrawal of the rejection of Claim 41 under 35 U.S.C. 102.

Claims 42-45 depend from Claim 41 and are allowable for the same reasons. Applicants respectfully request the withdrawal of the rejection of Claims 42-45 under 35 U.S.C. 102.

Regarding Section 102 Rejections

Claims 9-11 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Wiggerman in view of Amyot. The rejection is respectfully traversed.

Claims 9-11 are dependent on Claim 1 and are allowable for the same reasons. Further, one skilled in the art would not look to combine Wiggerman with Amyot to correct for non-linearities in the pulse stream because neither reference corrects for non-linearities in the pulse stream. Thus, Applicant respectfully requests the withdrawal of the rejection of Claims 9-11 under 35 U.S.C. 103.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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